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A Taxonomic Study of the Subtribe Lathrobiina (Coleoptera, Staphylinidae) in Korea

Young-Bok CHO

Natural History Museum, Hannam University, Taejon, 306-791 Korea
E-mail: youngcho@eve.hannam.ac.kr

Abstract A taxonomic review of the subtribe Lathrobiina in Korea is presented. Five species are recognized, four of which are reported for the first time from Korea (*Domene crassicornis* (Sharp), *D. curtipennis* Sharp, *Tetartopeus pallipes* (Sharp), and *T. fragile* (Sharp)). A key to all known species of the subtribe and illustrations of aedeagus are provided.

Key words Coleoptera, Staphylinidae, Paederinae, Lathrobiina, taxonomy, Korea

INTRODUCTION

The subtribe Lathrobiina is characterized by the apex of the hind tibia with ctenidum on both sides, labrum without tooth, and 1st tarsomere shorter than 2nd (Cameron, 1931; Adachi, 1955; Newton, 1990). Most members are found near stream or wet debris. There are about 60 species belonging to five genera of this subtribe in the Far East Asia. But only one species of this subtribe, *Lathrobium digum* Sharp, was recorded in Korea by Yuh *et al.* (1985). In this study, *Domene crassicornis* (Sharp), *D. curtipennis* Sharp, *Tetartopeus pallipes* (Sharp), and *T. fragile* (Sharp) are newly reported to the Korean fauna. A key, photographs of adults, and illustrations of aedeagus are provided herein.

Abbreviations of provincial names of Korea used as follows: CB: Chungchongbuk-do, CN: Chungchongnam-do, CHB: Chollabuk-do, CHN: Chollannam-do, CJ: Cheju-do, KB: Kyoungsangbuk-do, KN: Kyoungsangnam-do, KW: Kangwon-do.

RESULTS

A key to the Korean species of the subtribe Lathrobiina

1. Pronotum oval; head and pronotum very roughly and closely punctured ..... Genus *Domene* 2
- Pronotum oblong; head and pronotum morderately punctured 3
2. Elytra black; forefemur and the posterial half of mesofemur and metafemur piceous .....

..... *Domene crassicornis*

- Elytra dusky red except for middle area ..... *Domene curtipennis*

3. Width of neck less than 1/3 (or clearly less than 1/2) as wide as head; head narrower than pronotum ..
..... Genus *Tetartopeus* 4

- Width of neck more than 1/2 as wide as head; head as wide as pronotum ..... *Lathrobium digum*

4. Elytra with yellow spot at latero-posterial area ..... *Tetartopeus pallipes*

- Elytra with yellow at 1/3 posterial area ..... *Tetartopeus fragile*

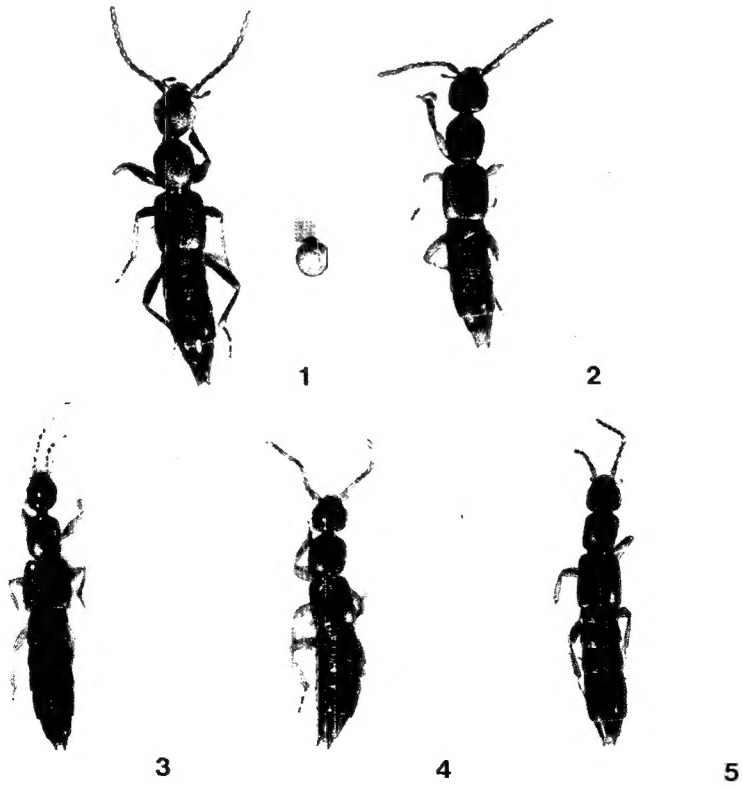
Subtribe Lathrobiina Laporte, 1835 긴개미반날개아족(新稱)

Genus *Domene* Fauvel, 1873 왕개미반날개속 (新稱)

Domene crassicornis (Sharp, 1874) 검은왕개미반날개(新稱)

(Figs 1, 6, 7)

Lathrobium crassicorne Sharp, 1874, Trans. ent. Soc. Lond.: 59.



Figs 1-5. Adults of Lathrobiina spp: 1, *Domene crassicornis* (Sharp), ♂; 2, *Domene curtipennis* Sharp, ♂; 3, *Tetartopeus pallipes* (Sharp), ♂; 4, *Tetartopeus fragile* (Sharp), ♀; 5, *Lathrobium digum* Sharp, ♂.

Domene crassicornis: Sharp, 1889: 260; Bernhauer et Schubert, 1912: 253; Adachi, 1955: 28; Adachi, 1957: 187; Nakane, 1963: 89; Shibata, 1977: 61-62; Watanabe, 1985: 287; Li, 1992.

Redescription. Adult. Body length 9.5-10 mm (Fig. 1). Body black, antennae piceous except last three antenomeres and 1st antennomere more paler than others, legs yellowish brown except pro-femur and apical half of meso and meta-femur piceous. Head suborbiculate, as wide as pronotum, densely and rugosely punctured but the area between antennae insertion shining and impunctate. Pronotum rather longer than width, the front angles entirely rounded, median posterial portion with short longitudinal carina, coarsely and densely punctured. Elytra rather wider than pronotum, brassy color, closely and finely punctured. Abdomen densely and finely punctured, 8th sternite of male emarginate deeply at the median posterial margin, each side of emargination with short balck setae, 7th sternite of male broadly emarginate at the median posterial margin, with short balck setae along the middle of posterial margin.

Male genitalia (Figs 6, 7). Median lobe broad and apically narrow, lateral side rounded. Paramere longer than median lobe, the basal area very broad and the lateral middle area emarginated sharply in dorsal view, the middle area with longitudinal carination.

Material examined. KW- 1ex., Sokumgang, Kangnung, 30. V. 1987 (Y.B. Cho); KB- 1ex., Munkyungsaejae Provincial Park, Munkyung, 8. V. 1999 (Y.B. Cho); 1ex., Munkyungsaejae Provincial Park, Sangcho, Munjyung, 29. V. 1996 (Y.B. Cho); 2exs., Mt. Hakgasan, Bukhu, Andong, 17. VII. 1998 (Y.B. Cho).

Distribution. Korea, Japan, China.

Remark. This species is close to *Domene curtipennis* Sharp, but the former is larger than the latter, with black elytra, while that of the latter dusky red.

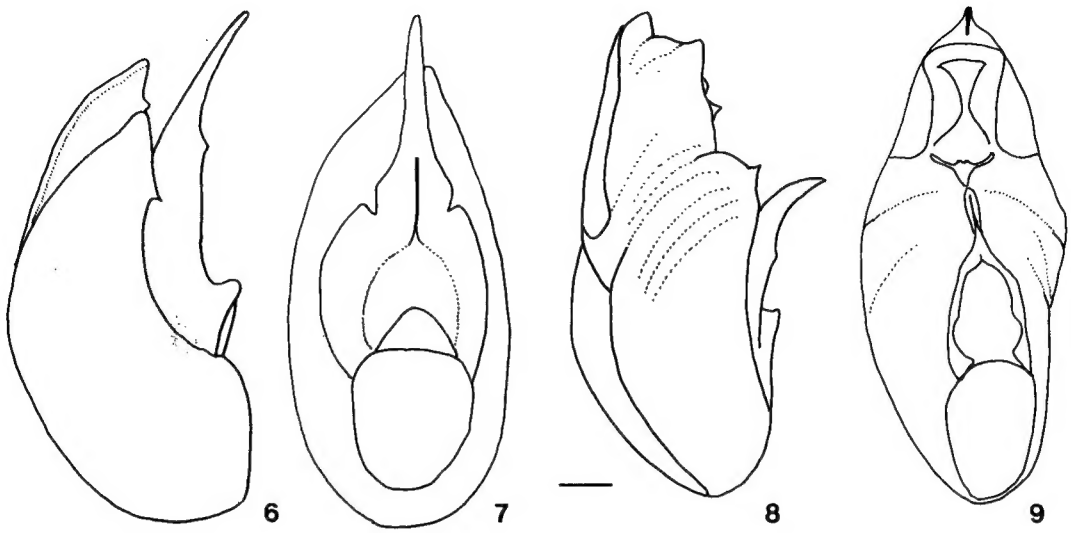
***Domene curtipennis* Sharp, 1889** 검붉은딱지왕개미반날개 (新稱)

(Figs 2, 8, 9)

Domene curtipennis Sharp, 1889. Ann. Mag. nat. Hist. (6)3: 261; Bernhauer et Schubert, 1912: 253; Adachi, 1955: 28; Adachi, 1957: 187; Nakane, 1963: 89; Shibata, 1977: 62-63; Watanabe, 1985: 287; Li, 1992: 52.

Redescription. Adult. Body length 6.5-7.5 mm (Fig. 2). Body piceous except for elytra, antennae red but last 3 antenomeres more paler than the rest, legs yellow. Head suborbiculate, densely and coarsely punctured but the area between antennae insertion shining and impunctate. Pronotum longer than broad, slightly narrowing to posterior, densely and rugosely punctured. Elytra rather wider than pronotum, dusky reddish color except middle area, densely and finely punctured. Abdomen piceous but paler at the extremity, densely and finely punctured, 8th sternite of male very shallowly emarginate at the median posterial margin, with longitudinal groove and short black setae along the median posterial area, 7th sternite of male emarginate broadly and shallowly at the median posterial margin, with longitudinal groove and short black setae along the median posterial area.

Male genitalia (Figs 8, 9). Median lobe broad and rather ellipitical, the upper ventral plate sclerotized in



Figs 6-9. Aedeagus of Lathrobiina spp.: 6, *Domene crassicornis* (Sharp), lateral view; 7, *ditto*, dorsal view; 8, *Domene curtipennis* Sharp, lateral view; 9, *ditto*, dorsal view. (Scale: 0.11 mm)

lateral view, the lateral subapex area sclerotized in dorsal view. Paramere short and very broad at basal area, the tip bented dorsally, the apical area carinate longitudinally.

Material examined. CB- 1ex., Mt. Minjujisan, Youngdong, 7. IX. 1997 (Y.B. Cho); 1ex., Munkyungsaejae Provincial Park, Kwoesan, 30. V. 1996 (Y.B. Cho); CHB- 5exs., Mt. Deokyusan, Seolchon, 28-29. V. 1999 (Y.B. Cho); CHN- 3exs., Mt. Paegunsan, Kwangyang, 11. VI. 1999 (Y.B. Cho); KB- 4exs., Munkyungsaejae Provincial Park, Munkyung, 8. V. 1999 (Y.B. Cho); 1ex., Munkyungsaejae Provincial Park, Sangcho, Munkyung, 29. V. 1996 (Y.B. Cho); 18exs., Mt. Hakgasan, Bukhu, Andong, 17. VII. 1998 (Y.B. Cho); 1ex., Dongchon, Yean, Andong, 15. VII. 1987 (Y.B. Cho); 1ex., Mt. Chuwangsan, Chongsong, 28-29. VI. 1987 (Y.B. Cho); 3exs., Mt. Palgongsan, Kyungsan, 12. VI. 1998 (Y.B. Cho); KN- 5exs., Mt. Whangmaesan, Hapchon, 29. VI. 1998 (Y.B. Cho); 1ex., Mt. Kajisan, Ulsan, 22. V. 1999 (Y.B. Cho); 3exs., Mujechi Swamp, Mt. Jungjoksan, Ulsan, 19. VIII. 1997 (Y.B. Cho).

Distribution. Korea, Japan, China.

Remark. This species is much smaller than *Domene crassicornis* (Sharp).

Genus *Tetartopeus* Czwalina, 1888 무늬긴개미반날개속 (新稱)

Remark. This genus was treated as a subgenus of the genus *Lathrobium* (Cameron, 1931; Adachi, 1955; Shibata, 1977) but it is considered as a genus separated from the latter (Lohse, 1964; Coiffait, 1982).

Tetartopeus pallipes (Sharp, 1889) 황점무늬긴개미반날개 (新稱)

(Figs 3, 10, 11)

Lathrobium pallipes Sharp, 1889. Ann. Mag. nat. Hist. (6)3: 257; Bernhauer et Schubert, 1912: 265; Adachi, 1955: 31; Adachi, 1957: 186; Nakane, 1963: 89; Shibata, 1977: 69 – 70; Watanabe, 1985: 287; Li, 1992: 52.

Redescription. Adult. Body length 5.8–6.2 mm (Fig. 3). Body black and shining, antennae piceous but 1st and last two antenomeres more paler, legs brownish yellow. Head subquadrate, finely punctured with the longitudinal smooth line along the middle. Pronotum oblong, rather closely punctured but lateral sides more finer and closer than the middle, with longitudinal smooth line along the middle. Elytra closely and rather finely punctured, longer and broader than the pronotum, with a distinct yellow spot at the laterior apical angle of elytron. Abdomen densely and minutely punctured, 8th stenite of male rather smally and broadly emarginate at the median posterial margin, 7th sternite of male with very slight depression along the middle.

Male genitalia (Figs 10, 11). Median lobe ellipitical, the upper side rolled in dorsal view. Paramere slightly shorter than median lobe, the tip sharply protuded in lateral view, the dorsal middle area with longitudinal groove.

Material examined. CB- 2exs., Seokho, Gunbuk, 20. V. 1996 (Y.B. Cho); CN- 1ex., Naehung, Kongju, 8. V. 1996 (P. Tripotin); 1ex., Mt. Kyeryongsan, Kongju, 8. V. 1999 (Y.B. Cho); 1ex., Majon, Kumsan, 3. VIII. 1997 (P. Tripotin); CHB- 2exs., Mt. Unjangsan, Juchon, Jinan, 20. V. 1998 (Y.B. Cho); KB- 1ex., Mt. Sunamsan, Gaum, Uison, 24. VI. 1998 (Y.B. Cho); 1ex., Mt. Chuwangsan, Chongsong, 28–29. VI. 1987 (Y.B. Cho); KN- 1ex., Mt. Kajisan, Ulsan, 15. V. 1999 (Y.B. Cho); CJ- 1ex., Dongsuak, 30. VIII. 1997 (Y.B. Cho); 1ex., Dongsuak, 24. V. 1998 (Y.B. Cho); 1ex., Mulyoungari Swamp, Mt. Suryungsan, 22. V. 1998 (Y.B. Cho).

Distribution. Korea, Japan.

Remark. This species is easily identified by the yellow spot at the laterior apical angle of elytron.

Tetartopeus fragile (Sharp, 1889) 황띠무늬긴개미반날개 (新稱)

(Fig. 4)

Lathrobium fragile Sharp, 1889. Ann. Mag. nat. Hist. (6)3: 258; Bernhauer et Schubert, 1912: 260; Adachi, 1955; 30; Adachi, 1957: 186; Shibata, 1977: 66.

Redescription. Adult. Body length 5.0–5.5 mm (Fig. 4). Body black and shining, antennae brownish red, legs yellowish brown. Head as suboblong, with scattered punctures, the middle area impunctured. Pronotum oblong, with scattered punctures and longitudinal smooth line along the middle. Elytra as long as the pronotum with sparing punctures, piceous but the apical 1/3 yellow. Abdomen finely and closely punctured, 8th sternite of male very shortly emarginate at the median posterial margin, 7th sternite of male with a slight depression along the middle.

Material examined. KB- 1ex., Jikjisa Temple, Kimchon, 7. VI. 1996 (Y.B. Cho); KN- 1ex., Mujechi Swamp, Mt. Jungjoksan, Ulsan, 23. IV. 1996 (Y.B. Cho); 3exs., Mujechi Swamp, Mt. Jungjoksan, Ulsan, 23. VII. 1996 (Y.B. Cho).

Distribution. Korea, Japan.

Remarks. This species is easily identified by the yellow 1/3 posterial area of elytra. I colud not examine the male genitalia of this species.

Genus *Lathrobium* Gravenhorst, 1802 긴개미반날개속 (改稱)

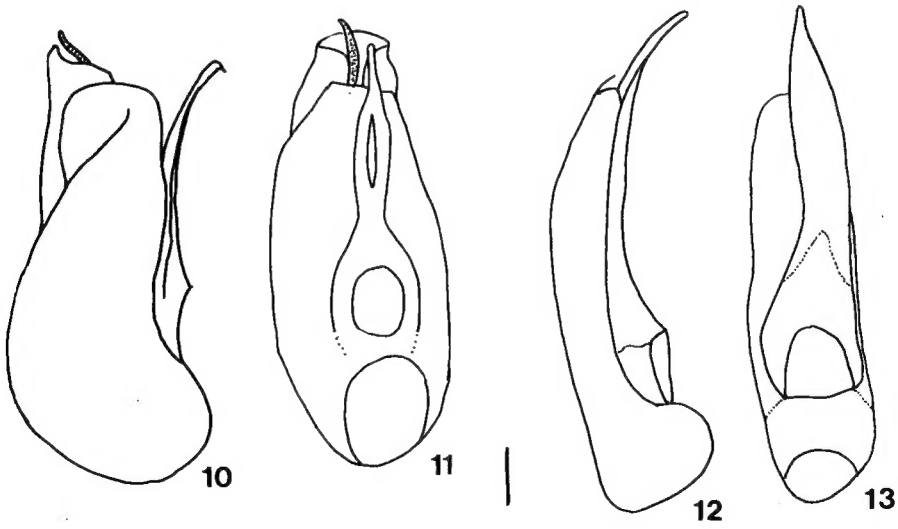
Lathrobium dignum Sharp, 1874 홍딱지긴개미반날개 (改稱)

(Figs 5, 12, 13)

Lathrobium digne Sharp, 1874. Trans. ent. Soc. Lond.: 55.

Lathrobium dignum: Bernhauer et Schubert, 1912: 260; Adachi, 1955; 31; Adachi, 1957: 186; Nakane, 1963: 89; Shibata, 1977: 65-66; Watanabe, 1985: 286; Yuh *et al.*, 1985: 238: Li, 1992: 52.

Redescription. Adult. Body length 8.4-9.4 mm (Fig. 5). Body black except elytra and shining, antennae piceous, legs brownish red. Head subquadrate, as wide as pronotum, lateral sides parallel, morderately punctured but scarsely punctured on vertex. Pronotum rectangular, much longer than width, slightly narrowing to posterior, finely punctured with longitudinal smooth line along the middle. Elytra slightly longer than pronotum, wider than pronotum, closely and finely punctured, bright red but basal area and scutellum black. Abdomen closely and finely punctured, 8th sternite of male deeply and broadly



Figs 10-13. Aedeagus of Lathrobiina spp.: 10, *Tetartopeus pallipes* (Sharp), lateral view; 11, *ditto*, dorsal view; 12, *Lathrobium digum* Sharp, lateral view; 13, *ditto*, dorsal view. (Scale: 0.11 mm)

emarginate at the median posterial margin, each side of emargination with short balck setae, with a longitudinal groove along the middle, 6th and 7th sternite of male with a slight depression along the middle.

Male genitalia (Figs 12, 13). Median lobe elongate and much shorter than paramere, the dorsal apex with protrusion of sclerotized plate. Paramere asymmetric and narrowing to apex.

Material examined. CN- 1ex., Hannam univ. Campus, Taejon, 1. IX. 1982 (Y.B. Cho); 2exs., Shintanjin, Taejon, 30. VIII. 1986 (Y.B. Cho); CN- 1ex., Majon, Kumsan, 13. VIII. 1997 (P. Tripotin); CB- 3exs., Janggae, Okchon, 4. VIII. 1986 (Y.B. Cho); KB- 1ex., Mt. Chongryongsan, Gachang, Taegu, 12-13. VIII. 1997 (Y.B. Cho).

Distribution. Korea, Japan, China.

Remark. Only a species of the genus *Lathrobium* is newly known from Korea, whereas over 30 species was recorded in Japanese *Lathrobium*.

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한국産 긴개미반날개亞族 (딱정벌레目, 반날개科)의 분류학적 연구

조 영 복

한남대학교 자연사박물관

한국산 긴개미반날개아족에 대한 분류학적 검토를 수행하였다. 본 연구 결과 한국산 긴개미날개아족은 미기록종인 *Domene crassicornis* (Sharp) (검은왕개미반날개), *Domene curtipennis Sharp* (검붉은딱지왕개미반날개), *Tetartopeus pallipes* (Sharp) (황점무늬긴개미반날개) 및 *Tetartopeus fragile* (Sharp) (황띠무늬긴개미반날개)를 포함하여 3속 5종으로 밝혀졌다.

검색어 : 딱정벌레목, 반날개과, 개미반날개아과, 긴개미반날개아족, 분류, 한국

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